MIC Series 500 Classic

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BOSCH
Invented for life

- Rated to an industry leading IP68
- Multiple camera programming through Camset software
- Many mounting and viewing options
- Easy set-up and configuration through the powerful on-screen display
- Multi-protocol operation

The MIC Series 500 Classic combines cutting-edge technology with the latest production techniques to provide a class-leading feature set in an economical package. The MIC Series 500 Classic range takes high quality surveillance to new levels of excellence.
As a best-fit camera for virtually any security application, it can be installed in the harshest of environments. Thanks to its IP68-rated aluminum casing, the MIC Series 500 Classic functions perfectly in the most demanding conditions. This tough casing provides protection from the elements and physical attack. Coupled with an optically perfect, flat viewing window, integrated long life silicone wiper and a reversible rain shield, ensures high quality images regardless of the installed environment.
The brushless-motor technology offers ultra-reliable, whisper-quiet operation with full 360º continuous rotation pan and 267º tilt control for exceptional viewing capability. Small increment pan/tilt speeds from just 0.2º per second to 120º per second gives the user precise control. This speed control is especially important when used with video analytic systems, particularly for tracking subjects when fully zoomed in.

On-screen menus allow camera set-up from the control room via a remote keyboard. The MIC Series 500 Classic is compatible with all leading control systems and has a wide choice of protocols available.
A choice of true day/night camera modules offering up to 36x optical zoom (12x digital) are available, providing 540 TV lines (PAL). Preset positions, preset tours and random tours ensure flexible surveillance options.
The MIC Series 500 Classic features a twist-lock canting function. This allows the camera to be securely canted on-site at 45º for pole mount applications allowing the base of the pole to be viewed. The sheer flexibility of mounting options allows the camera to be installed upright, inverted or canted to achieve the perfect field of view.

Functions

Rated to an industry leading IP68
Subjected and certified to rigorous IP68 dust and immersion tests, the MIC Series 500 Classic is perfectly suited for installation in even the most unforgiving environments.

Brushless motor technology
Ultra-reliable brushless motors provide whisper-quiet operation and smooth control.

Host of mounting and viewing options
Faultless operation in upright, inverted or canted positions gives the user a host of mounting and viewing possibilities. The twist-lock canting feature allows the MIC Series 500 Classic to be canted to 45º on site. This allows, for example, the base of the pole to be viewed in upright pole-mounted applications.

Easy set-up
Camera settings can be adjusted via the on-screen menu from a control room via a remote keyboard.

Multi-protocol operation
Compatible with virtually any control equipment available today, the MIC Series 500 Classic range seamlessly integrates with the vast majority of security systems.

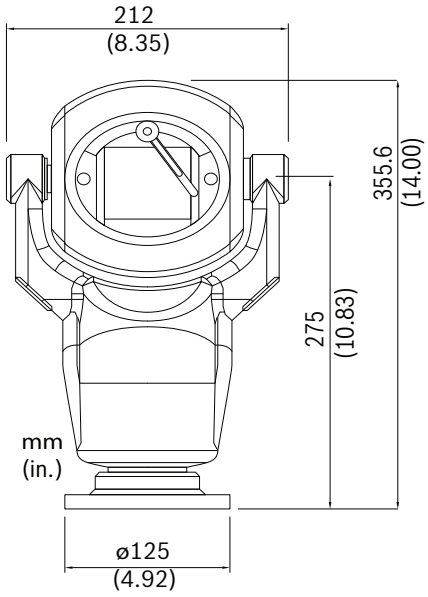
Applications:
- General CCTV
- Town centers
- ANPR systems
- Vandalism prone areas
- Extreme environments
- Rapid deployment
- High security
- Prestigious developments
- Broadcast
- Marine/costal
- Architectural

Certifications and approvals

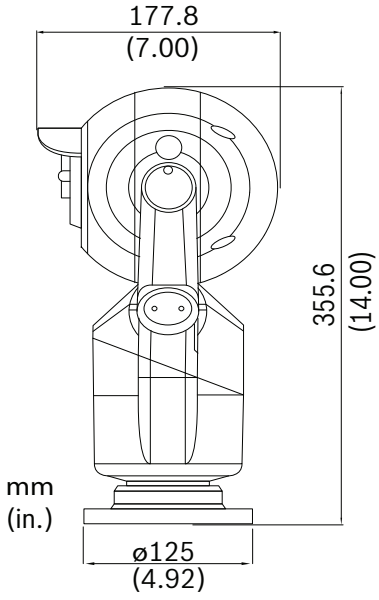
Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations, including EN50130-4 and EN61000-3-2 & 3-3 and EN55022
Product Safety	Complies with CE regulations, UL, EN, and IEC Standards 60950-1 & 22
Weatherproofing	IP68 (1m submersion for 24 hours)

Region	Certification	
Europe	CE	2004/108/EC, 2006/95/EC
Global	IP Rating	
USA	UL	UL 60950-1, 2nd Edition:2007
	FCC	CFR 47 FCC part 15:2009, Class B
Canada	CSA	CAN/CSA-C22.2 No. 60950-1-07

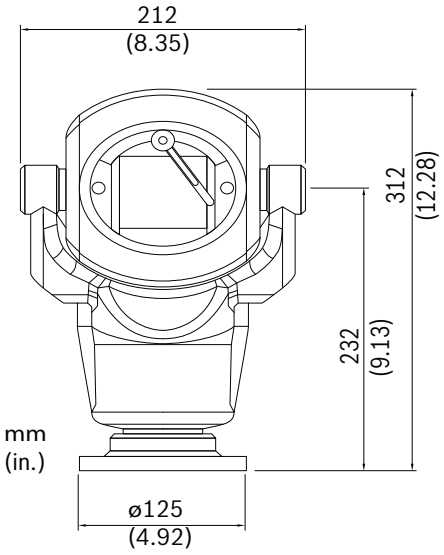
Installation/configuration notes



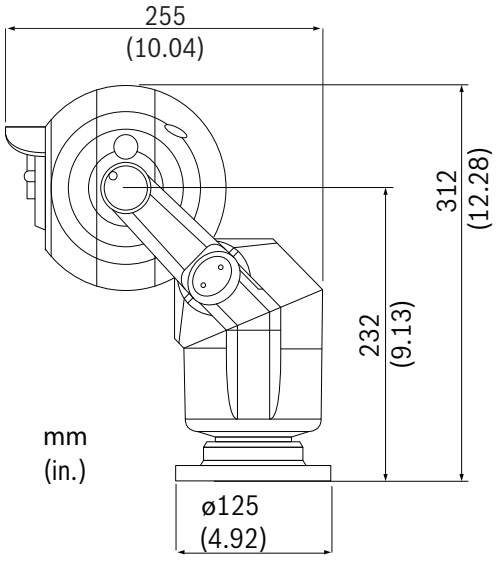
Front Detail, 90° (straight)



Side Detail, 90° (straight)



Front Detail, 45° (canted)



Side Detail, 45° (canted)

Technical specifications

Camera Module

Image Sensor	1/4 in. Exview CCD (WDR)
Effective Pixel Elements	Approx. 440,000; 752(H) x 582(V) PAL
Horizontal Resolution	540 TVL
Filter	Automatic mechanical IR cut filter
Focus System	Auto or manual
Iris	Auto or manual with slow shutter integration modes
Synchronization	Internal / External (V-Lock)
Signal-to-Noise Ratio (SNR)	50 dB or more
Back Light Compensation (BLC)	On/Off
White Balance	Automatic
Automatic Gain Control (AGC)	-3 to 28 dB, 2 dB steps
Aperture Control	16 Steps

18x Optical Zoom Module

Lens	F=4.1 mm (wide) to 73.8 mm (tele), F1.4 to F3.0
Zoom	18x optical (12x digital)
Angle of View	48° (wide) to 2.8° (tele)
Minimum Illumination	1/60 s mode, 0.7 lx (typical) (F1.4, 50 IRE) 1/4 s mode, 0.07 lx (typical) (F1.4, 50 IRE)
Shutter Speed	1/3 to 1/10,000 s (20 steps) PAL

36x Optical Zoom Module

Lens	F=3.4 mm (wide) to 122.4 mm (tele), F1.6 to F4.5
Zoom	36x optical (12x digital)
Angle of View	57.8° (wide) to 1.7° (tele)
Minimum Illumination	1/60 s mode: 1.4 lx (typical) (F1.6, 50 IRE) 1/4 s mode: 0.1 lx (typical) (F1.6, 50 IRE)
Shutter Speed	1/3 to 1/10,000 s (20 steps) PAL

Operational

Auto Flip	Yes
Manual Flip	Yes
E-flip	Yes, E-flip enables the camera module to invert the image
Presets	64 telemetry presets accurate to 0.08° utilizing resolver technology using the on-screen menu or via Camset, Up to 10 camera module presets (Sony sets) to allow ANPR, color correction etc.
Preset Tours	Four (4) tours each with up to 32 presets
Pattern Tours	Two (2) tours
Sector Titles	64 sectors, 20 characters per title
Preset Titles	20-character caption for each of the 64 presets
Home Position	Preset 1 or tour
On-screen Menu	Most camera functions can be accessed through the on screen menu

Communication and Protocols

Communication	RS485 / RS422
Control Protocol	FV and Bosch protocols pre-installed. Twin protocol packs including FV/Pelco, FV/VCL, FV/American Dynamics and FV/Kalatel can be loaded using the MIC Universal Camera Setup Software Utility (Camset)

Connectivity

MIC Universal Camera Setup Software Utility (Camset)	Supplied free with each camera, Camset allows direct connection to a USB equipped PC via the MIC Series PSU or over a full duplex or IP network to provide access to all camera functions and useful diagnostic tools
Video	Coaxial via composite cable
Telemetry	Twisted pair. Simplex, half and full duplex operation via composite cable
Power	Via composite cable

Alarms

Alarm Inputs	One (1) tamper input (additional inputs possible with optional alarm card)
Alarm Communication	Tamper switch (ground connection)

Mechanical

Drive Unit	Brushless, integral pan/tilt motor drive
Pan Angle	360° continuous rotation
Pan Speed	Up to 120° per second (variable)
Tilt Angle	270°
Tilt Speed	0.2° to 80° per second (variable)
Speed Control	Closed loop electronics
Preset Accuracy	±0.17° typical
Proportional Pan/Tilt to Zoom	Yes

Electrical

Input Voltage	18 VAC
Power Consumption	25 W max.

Options

Camera Module	18x camera module or 36x camera module
Camera Color System	PAL
Telemetry Control Card	Built-in
Washer Drive	Optional washer kit (MIC-WKT Kit with washer pump drive)
Alarm Card	Optional, 8-input with washer pump drive function, fits in MIC Series power supply
Biphase Converter	Optional, fits in MIC Series power supply expansion slot (BP-4)

Environmental

Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Weatherproofing	IP68 (1m submersion for 24 hours)

Construction

Dimensions (WxHxD)		
	Upright and Inverted	212 x 355 x 177 mm (8.35 x 13.98 x 6.97 in.)
	Canted	212 x 312 x 255 mm (8.35 x 12.28 x 10.0 in.)
Weight		7 kg (15.43 lb) including 4 in. pitch circle diameter (PCD) base
Viewing Window		Tempered flat glass
Construction Material		Cast solid aluminum
Standard Colors		Black (RAL9005) or white (RAL9010)
Standard Finish		Alocrom 1200 surface treatment with powder coat paint, sand finish
Window Wiper		Standard
Canting		Twist Lock canting secured by two security screws

Ordering information

MIC500ALBUR14618P MIC Series 500 Classic 18x PAL Camera with Integrated Wiper, Black
18x, PAL, PTZ camera, black, with an integrated wiper
Order number **MIC500ALBUR14618P**

MIC500ALBUR14636P MIC Series 500 Classic 36x PAL Camera with Integrated Wiper, Black
36x, PAL, PTZ camera, black, with an integrated wiper
Order number **MIC500ALBUR14636P**

MIC500ALAUR14618P MIC Series 500 Classic 18x PAL Camera with Integrated Wiper, White
18x, PAL, PTZ camera, white, with an integrated wiper
Order number **MIC500ALAUR14618P**

MIC500ALAUR14636P MIC Series 500 Classic 36x PAL Camera with Integrated Wiper, White
36x, PAL, PTZ camera, white, with an integrated wiper
Order number **MIC500ALAUR14636P**

Accessories

MIC-24PSU-UL 24 VAC Camera Power Supply
24 VAC, 50/60 Hz power supply for MIC Series cameras
Order number **MIC-24PSU-UL**

MIC-115PSU-UL 115 VAC Camera Power Supply
115 VAC, 60 Hz power supply for MIC Series cameras
Order number **MIC-115PSU-UL**

MIC-240PSU-UL 240 VAC Camera Power Supply
230 VAC, 50 Hz power supply for MIC Series cameras
Order number **MIC-240PSU-UL**

MIC-ALM Alarm and Washer Pump Drive Card
8 Input alarm and washer pump drive card for PSU (Not for IR PSU)
Order number **MIC-ALM**

MIC-BP4 Biphase Converter
Biphase converter for non-IR versions of MIC series power supply units
Order number **MIC-BP4**

MICUSB485CVTR2 USB to RS485 Signal Converter
USB to RS485 signal converter to allow MIC Series cameras to connect to a PC, supplied with each camera
Order number **MICUSB485CVTR2**

MIC-501KBD Keyboard Controller
Keyboard controller with 3-axis joystick for 1 camera (FV PROTOCOL ONLY)
Order number **MIC-501KBD**

MIC-516KBD Keyboard Controller
Keyboard controller with 3-axis joystick for 1 to 16 cameras (FV PROTOCOL ONLY)
Order number **MIC-516KBD**

MIC-WKT Washer Kit
Washer kit for non infrared MIC models (includes washer pump drive card, washer nozzle and mounting brackets for wall and 4 in. PCD base)
Order number **MIC-WKT**

HAC-WAS05-20 24 VAC Washer
24 VAC washer inst. 4M 25L
Order number **HAC-WAS05-20**

UPA-2420-50 Power Supply
220 VAC, 50 Hz, 24 VAC, 20 VA Out
Order number **UPA-2420-50**

UPA-2450-60 Power Supply, 120 V, 60 Hz
Indoor, 120 VAC, 60 Hz In; 24 VAC, 50 VA Out
Order number **UPA-2450-60**

MIC-DCA-WD Deep Conduit Adapter, White
Deep conduit adapter for 4 in. PCD base, white sand finish (RAL9010)
Order number **MIC-DCA-WD**

MIC-DCA-BD Deep Conduit Adapter, Black
Deep conduit adapter for 4 in. PCD base, black sand finish (RAL9005)
Order number **MIC-DCA-BD**

MIC-SCA-WD Shallow Conduit Adapter, White
Shallow conduit adapter for a MIC-WMB, a MIC-PMB, or a MIC-SPR mount, white sand finish (RAL9010)
Order number **MIC-SCA-WD**

MIC-SCA-BD Shallow Conduit Adapter, Black
Shallow conduit adapter for a MIC-WMB, a MIC-PMB, or a MIC-SPR, black sand finish (RAL9005)
Order number **MIC-SCA-BD**

MIC-SPR-WD Spreader Plate, White
Aluminum spreader plate suitable for brickwork surface mounting, white sand finish (RAL9010)
Order number **MIC-SPR-WD**

MIC-SPR-BD Spreader Plate, Black
Aluminum spreader plate suitable for brickwork surface mounting, black sand finish (RAL9005)
Order number **MIC-SPR-BD**

MIC-CMB-WD Corner Mount Bracket, White
Corner mount bracket, white sand finish (RAL9010)
Order number **MIC-CMB-WD**

MIC-CMB-BD Corner Mount Bracket, Black
Corner mount bracket, black sand finish (RAL9005)
Order number **MIC-CMB-BD**

MIC-WMB-WD Wall Mount Bracket, White
Wall mount bracket, white sand finish (RAL9010)
Order number **MIC-WMB-WD**

MIC-WMB-BD Wall Mount Bracket, Black
Wall mount bracket, black sand finish (RAL9005)
Order number **MIC-WMB-BD**

MIC-PMB Pole Mount Bracket
Pole mount bracket (includes 2 x 455 mm stainless steel banding straps for pole diameters 75 to 145 mm)
Order number **MIC-PMB**

MIC-2M-S 2 m Shielded Composite Cable
Shielded Composite 2 m cable that provides power, telemetry and video connection from a MIC Series camera to a MIC Series power supply
Order number **MIC-2M-S**

MIC-10M-S 10 m Shielded Composite Cable
Shielded Composite 10 m cable that provides power, telemetry and video connection from a MIC Series camera to a MIC Series power supply
Order number **MIC-10M-S**

MIC-20M-S 20 m Shielded Composite Cable
Shielded Composite 20 m cable that provides power, telemetry and video connection from a MIC Series camera to a MIC Series power supply
Order number **MIC-20M-S**

MIC-25M-S 25 m Shielded Composite Cable
Shielded Composite 25 m cable that provides power, telemetry and video connection from a MIC Series camera to a MIC Series power supply
Order number **MIC-25M-S**

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